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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,905	12/14/2000	John Boreczky	FXPL-01009US0MCF/TAW	2658

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EXAMINER
SHANNON, MICHAEL R

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/738,905	BORECZKY ET AL.
	Examiner	**Art Unit**	
	Michael R Shannon	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _14 December 2000_.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-14_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-14_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _14 December 2000_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _3 Feb 2003_.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   New corrected drawings in compliance with 37 CFR 1.121(d) are required in this

application because the current, informal drawings are not of sufficient quality and are

not in accordance with 37 CFR 1.84. Applicant is advised to employ the services of a

competent patent draftsperson outside the Office, as the U.S. Patent and Trademark

Office no longer prepares new drawings. The corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The requirement for

corrected drawings will not be held in abeyance.

2.   Figure 1 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description: 100, 102, 105, 115, 120, 125, 130, 135, 620, and 930. Corrected drawing

sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claim 1, 3, 5, 10, 11, and 13 are rejected under 35 U.S.C. 102(e) as being

anticipated by Yeo (US Pat No. 6,711,741), cited by examiner.

With regards to claim 1, the claimed method for providing video data is met as

follows: The claimed step of opening a main connection for receiving transmissions of a

data flow, is met by data path 324 (Figure 3), as described in column 3, lines 48-50,

wherein Yeo teaches a server sending source video frames through data path 324 and

temporal snapshots through data path 322 to the client 102. The claimed step of

opening a second connection for transmission of at least one look-x data stream

comprising data from said data flow is met by data path 322 (Figure 3), as described in

column 3, lines 48-50, discussed above. The claimed step of indexing at least one point of the look-x data stream to at least one corresponding point in the data flow is met by the relation between the temporal snapshots and the continuous video frames. Column 4, lines 52-58 teach a relation between the snapshots and the continuous video, Yeo states that the display requests the snapshot's corresponding segment of source video frames 106 from the server 100. This correspondence meets the claimed indexing step. The claimed step of providing control of a playback position of the data flow based on the indexed points in the look-x data stream is met by column 4, lines 52-58, wherein Yeo teaches the ability for a user to control the playback and select the source frames to view based on the temporal snapshots.

With regards to claim 3, the claimed step of displaying at least one of a skip forward and a skip backward button configured to step a play position of the data flow to a position corresponding to a respective one of a next and a previous look-x data points relative to the current play position of the data flow is met by column 5, lines 1-3, wherein Yeo teaches the use of options within the media player 612 to step to the previous frame or the next frame, so as to allow the user to step through the playback sequence.

With regards to claim 5, the claimed data flow being a video and look-x points being frames of the data flow and being retrieved from the main connection or the second connection is met by column 3, lines 48-50, wherein Yeo discloses source video frames 106 (the video) being sent on the main data path 324, and temporal snapshots (the look-x points/frames) being sent on a second data path 322.

With regards to claim 10, the claimed device for client side video indexing is met as follows: The claimed video player is met by media player 612 (Figure 6a). The claimed main data stream for receiving transmissions of a data flow is met by stream 324 and the connection to network 104 (Figure 3 and as described in column 3, lines 48-50). The claimed look-x data stream connection for receiving transmissions of the data flow is met by stream 322 and the connection to network 104 (Figure 3, and as described in column 3, lines 48-50). The claimed controller for indexing at least one point of the look-x data stream to a corresponding at least one point in the data flow is met by the relation between the temporal snapshots and the continuous video frames. Column 4, lines 52-58 teach a relation between the snapshots and the continuous video, Yeo states that the display requests the snapshot's corresponding segment of source video frames 106 from the server 100. This correspondence meets the claimed controller for indexing. The claimed display for displaying at least one of the indexed look-x points is met by video display 216 (Figure 2) and application window 600, which displays temporal snapshots 602-610 (look-x points) and media player 612 (Figure 6a).

With regards to claim 11, the claimed skip forward and skip backwards buttons that each step a play position of the data stream to a respective one of a next and a previous look-x points relative to the current play position of the data stream are met by column 5, lines 1-3, wherein Yeo teaches the use of options within the media player 612 to step to the previous frame or the next frame, so as to allow the user to step through the playback sequence.

With regards to claim 13, the claimed select button for providing a user the

capability to select at least one of the indexed points enabling display of the data flow to

begin and the selected indexed point is met by column 4, lines 52-58, wherein Yeo

teaches the ability for a user to control the playback and select the source frames to

view based on the temporal snapshots.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claim 2, 4, 6, 7-9, 12, and 14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Yeo (US Pat. No. 6,711,741), cited by examiner, in view of Ceccarelli

(US Pat. No. 6,222,532), cited by examiner.

With regards to claim 2, Yeo teaches all of that which is discussed above with

regards to claim 1. Yeo does not expressly disclose the step of displaying a timeline

corresponding to the indexed look-x points, the timeline having at least one of the

indexed look-x points displayed so as to reference a position on the timeline. Ceccarelli

discloses a system with a timeline, which makes reference to a group of keyframes

(indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the

whole video at top, and a dark bar section, which indicates the section of keyframes

displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed

description of the "timeline" aspect of the invention. It would have been obvious to one

of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 4, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose the steps of displaying a timeline having representations of the indexed points. Yeo does however disclose the steps of selecting at least one of the indexed points, and displaying the data flow at a point beginning with the selected indexed point. Both of these steps are met by column 4, lines 52-58, wherein Yeo teaches the ability for a user to control the playback and select the source frames to view based on the selection of temporal snapshots. As stated before, Yeo does not expressly disclose the step of displaying a timeline with indexed points. Ceccarelli does disclose a system with a timeline, which makes reference to a group of keyframes (indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the whole video at top, and a dark bar section, which indicates the section of keyframes displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed description of the "timeline" aspect of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the

video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 6, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose that the second connection is a low resolution connection relative to the main connection. Ceccarelli discloses a system in which the provider (or server) can label keyframes before transmission to the client, in order to allow the client easy access to the chosen keyframes (column 1, lines 18-27). While Ceccarelli does not specifically state the use of two connections to the server (one for main video and one for the keyframes), he does, however, make a realization that "video distortions in relatively smallish keyframes have been experienced as tolerable, [and that] if a particular keyframe is enlarged, extra measures should be taken for picture improvement" (column 2, lines 4-7). This indicates an inherent understanding that the keyframes are often times transmitted as lower resolution images and will need some processing in order to display them at higher resolution requirements. Therefore, it can be understood that the lower resolution keyframes could be used and downloaded over a second lower resolution connection (the connection taught by Yeo). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the low resolution connection, as described by Ceccarelli, into the system of Yeo, in order to allow for more bandwidth conservation and the ability for the user to download more information regarding the keyframes and look-x points and not take up massive amounts of bandwidth in the process.

With regards to claim 7, Yeo teaches all of that which is discussed above with regards to claim 1. Yeo does not expressly disclose any of the steps of selecting, displaying, or updating the indexed look-x points. Yeo simply discussed the TSG 300 (column 3, lines 18-50), which serves to select and send the temporal snapshots to the client. Ceccarelli goes into detail about how the keyframes are selected, displayed, and updated. The claimed step of selecting a predetermined number of indexed look-x points is met by Figure 5, which shows a display of nine keyframes for selection by a user. Nine keyframes is more or less just a suggestion and could presumably be modified to select any number of keyframes as predetermined by the system. The claimed step of displaying the predetermined number of indexed points to provide reference for a playback control mechanism is met by Figure 5 again, which shows the typical display to the user with nine keyframes being selectable and referencing different portions within the video to allow for playback control. The claimed step of updating the selected predetermined number of index look-x points based on an update criteria is met by column 4, line 67 – column 5, line 3, wherein Ceccarelli teaches that the display is updated as the video progresses. The update criteria are based upon a distance from the current position. At the time of the invention, it would have been obvious to one or ordinary skill in the art to include the selecting, displaying, and updating steps as taught by Ceccarelli into the system as taught by Yeo, in order to allow the user to see pertinent keyframes and allow them to view keyframes in the near future and recent past.

With regards to claim 8, Yeo and Ceccarelli teach all of that which is discussed above with regards to claims 1 and 7. Yeo does not expressly disclose any step of selecting a predetermined number of look-x points such that each of the look-x points is within a predetermined distance of a first play position of the data flow. Ceccarelli inherently teaches that the number of keyframes on the display fall within a predetermined distance of the play position of the video. It is disclosed on column 4, lines 53-58, that the keyframes are located within seconds of each other, with the center keyframe being the currently displayed video segment. Therefore, Ceccarelli inherently shows that the keyframes that are currently displayed are within a predetermined time, and therefore distance of the play position. At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the inherent teachings of Ceccarelli, as discussed here, with the system as taught by Yeo, in order to allow the user to see pertinent keyframes and allow them to view keyframes in the near future and recent past.

With regards to claim 9, Yeo and Ceccarelli teach all of that which is discussed above with regards to claims 1 and 7. Yeo does not expressly disclose that the aforementioned update criteria comprise a change of the playback position a predetermined amount from the first play position during the selection step. Ceccarelli discloses a way of updating the keyframes (column 4, line 67 – column 5, line 3) and the idea of having the currently viewed video segment and its related keyframe in the center and past and future keyframes to the left and right, respectively. In other words, Ceccarelli discloses a dynamic display, which updates according to the currently viewed

video segment. At the time of the invention, it would have been obvious to one or ordinary skill in the art to implement the updating criteria of Ceccarelli with the system of Yeo, in order to allow for a dynamically updated display of pertinent keyframes in the near future and recent past.

With regards to claim 12, Yeo teaches all of that which is discussed above with regards to claim 10. Yeo does not teach the display displaying a timeline referenced to the data flow and at least one of the indexed look-x points, the indexed look-x points each displayed so as to reference a position on the timeline. Ceccarelli discloses a system with a timeline, which makes reference to a group of keyframes (indexed look-x points). Figure 4 is shown as a display to the user, with a timeline of the whole video at top, and a dark bar section, which indicates the section of keyframes displayed (144-148). Figure 4 and column 3, line 65 – column 4, line 47 give a detailed description of the "timeline" aspect of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the timeline as taught by Ceccarelli into the system as taught by Yeo in order to allow the user to get an overall feel for the progression of the video and frame location of the video presentation. Yeo does not provide specifics for the media player 612; however, a timeline would be an obvious addition to a typical media player.

With regards to claim 14, Yeo teaches all of that which is discussed above with regards to claim 10. Yeo does not expressly disclose that the look-x data stream connection is a low resolution data stream relative to the main data stream connection. Ceccarelli discloses a system in which the provider (or server) can label keyframes

before transmission to the client, in order to allow the client easy access to the chosen

keyframes (column 1, lines 18-27). While Ceccarelli does not specifically state the use

of two connections to the server (one for main video and one for the keyframes), he

does, however, make a realization that "video distortions in relatively smallish

keyframes have been experienced as tolerable, [and that] if a particular keyframe is

enlarged, extra measures should be taken for picture improvement" (column 2, lines 4-

7). This indicates an inherent understanding that the keyframes are often times

transmitted as lower resolution images and will need some processing in order to

display them at higher resolution requirements. Therefore, it can be understood that the

lower resolution keyframes could be used and downloaded over a second lower

resolution connection (the connection taught by Yeo). It would have been obvious to

one of ordinary skill in the art at the time of the invention to combine the low resolution

connection, as described by Ceccarelli, into the system of Yeo, in order to allow for

more bandwidth conservation and the ability for the user to download more information

regarding the keyframes and look-x points and not take up massive amounts of

bandwidth in the process.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Steele (US Pat. No. 5,884,056) discloses a system and method for browsing

videos on the web. He utilizes a timeline with selectable points within the video object.

Bronson (US Pat. No. 5,135,655) discloses a system and method for indexing

and retrieving audio-video data through the use of generated indexing words and

pictures. No network is used, however, two connections (one for video data, and one

for index data) are provided to the display device.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael R Shannon whose telephone number is 703-

305-6955. The examiner can normally be reached on M-F 7:30-5:00, alternate Friday's

off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller can be reached on 703-305-4795. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
September 22, 2004

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600